

State of California
Department of Water Resources
State Water Resources Control Board
Department of Health Services

2002 RECYCLED WATER TASK FORCE

**ECONOMICS WORKGROUP
MINUTES OF 27 AUGUST 2002 MEETING**

MEETING TIME AND LOCATION

Tuesday 27 August 2002, 9:30 AM - 1:00 PM, Room 1610, Cal/EPA Building, 1001 I Street, Sacramento, California. Some of the participants joined the meeting by phone.

ATTENDANCE

Rich Atwater *	Inland Empire Utility Agency
Fethi BenJemaa	Department of Water Resources
Kevin Booker	Sonoma County Water Agency
Roger Canfield	Department of Water Resources
Ray Hoagland	Department of Water Resources
Bill Jacoby	San Diego County Water Authority
Fawzi Karajeh	Department of Water Resources
Nancy Lee	California State Water Resources Control Board
Ron Linsky	National Water Research Institute
Richard Mills	California State Water Resources Control Board
John T. Morris	Metropolitan Water District of Southern California
Mark Tettemer	Central & West Basin Municipal Water Districts
Dave Williams *	East Bay Municipal Water District

(* by telephone)

SUMMARY OF PROCEEDINGS

The meeting was opened by a brief self-introduction of all the attendees and a welcoming statement by John Morris, the Workgroup Chair. Thereafter, the Chair and Co-chair, Nancy Lee, conducted the meeting following a preset agenda (a copy is attached) starting with a discussion on the purpose/objectives and charges of the Economics Workgroup.

Workgroup Purpose and Objectives

It was proposed to amend the charge of the workgroup so as to read as follow: The main charge of the workgroup is to develop guidelines (in lieu of criteria) for assessing the direct and indirect costs and benefits of water recycling...

Members of the Workgroup outlined that from an economic point of view, the lack of a guidebook that lays out the proper process and mechanism for a comprehensive economic analysis of recycled water projects constitutes an impediment to advancing the use of recycled water.

Issues of Concern

By examining the preliminary list of issues presented to the Workgroup as well as other ideas brought out during the meeting, it was decided to focus on the following main issues:

- Outline costs and benefits of water recycling and provide rigorous analysis of the true costs and benefits. It is important to distinguish between financial analysis and economic analysis. Economic analysis includes in addition to the financial aspects others aspects such as reliability and environmental impacts. In terms of costs, subsidy, the true value of which often exceeds its dollar value, should also be taken into account.
- Establish guidelines on funding equity (who benefits pays) and identify all the beneficiaries so as to alleviate locals from bearing all the costs whereas benefits often accrue statewide.
- Consider the cost of production as well as the cost of distribution of recycled water
- Consider the true value (non-market value) of water. There are some often unrecognized values of water not commonly considered in benefit-cost analyses, such as enhancing recreational access and improving environmental aesthetics.
- Compare to alternative water sources while considering only the incremental costs beyond those required to meet discharge limits. Also consider the quality of the existing fresh water sources which are becoming comparable to recycled water.

White Paper Outline

A draft outline for the Workgroup white paper presented by Nancy Lee was discussed (a copy is attached). Based on the presented outline, issue papers were identified and assigned to different workgroup members as described below. It was noted that some issues of concern such as funding issues, equity of funding and cost sharing might overlap with the Funding/CALFED Coordination Workgroup of the Task Force and coordination between the two workgroups will be needed.

The workgroup also recognizes the importance of the many studies that have been done in the domain of water recycling economics and plans to build on their findings to develop a compelling paper that addresses the issues identified and contributes to removing impediments to advancing water recycling. The workgroup white paper should also emphasize on real case studies to illustrate the importance of economic analysis in

evaluating recycling projects and the need to adopt a comprehensive approach instead of the classical cost/benefit financial analysis approach.

Research Assignments

The principal topics/issue papers identified where background development and in-depth research are needed to make the basis of the Workgroup's white paper are:

1. Introduction / Background information on the economics of water recycling, definitions and terminology, description of cost/benefit analyses currently used and the status quo [Chapters I to IV in the proposed Draft Outline] (Lead: Rich Mills)
2. Previous work and what's been done (Lead: Nancy Lee)
3. Case studies and existing funding strategies
 - OCWD Groundwater Replenishment System (Ron Linsky)
 - Moulton Niguel (Rich Mills)
 - Bay Area WRP (Wendy Illingworth)
4. Equity of funding / sharing of benefits and costs (John Morris (Lead) , Bill Jacoby, Dave Williams)

Milestones and Due Dates

The following tentative schedule was proposed and adopted toward the elaboration of the Economics Workgroup white paper due for presentation to the Task Force during its November 19th 2002 meeting:

8/27/02	First Work Group Meeting
9/6/02	Sub-Work Group Drafts
9/12/02	Task Force Meeting Economics Work Group In-depth Presentation
9/20/02	Circulate Refined and Annotated Outlines for Work Group review prior to 9/24 meeting
9/24/02	Second Work Group Meeting (9:00 - 12:00)

- 10/24/02 Circulate Draft Sub-Work Group Papers for Work Group review prior to 10/29/02 meeting
- 10/29/02 Third Work Group Meeting (9:00 - 12:00)
- 11/5/02 Final Sub-Work Group Papers Due
- 11/8/02 Circulate Draft White Paper to Work Group for Final Comments
- 11/19/19 Present Economics White Paper to Task Force

Draft 09/13/2002

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ECONOMICS WORKGROUP**

Meeting Agenda

**Tuesday August 27, 2002, 9:30 a.m. to 1:00 p.m.
Cal/EPA Building, Room 1610
1001 I Street, Sacramento, CA 95814**

Time	Topic	Facilitator
9:30 a.m. – 9:45 a.m.	Welcome and Introductions	John Morris
9:45 a.m. – 10:15 a.m.	Discussion of Workgroup Objectives and Goals	John Morris
10:15 a.m. – 11:15 a.m.	Discussion of Draft Outline of Economic Issues Concerning Recycled Water	Nancy Lee
11:15 a.m. – 11:30 a.m.	Break	
11:30 a.m. – 12:15 p.m.	Discussion of 9/12 /02 Presentation to Task Force	Nancy Lee
12:15 p.m. – 12:30 p.m.	Assign Action Items, Identify Workgroup Milestones, and Determine Milestone Due Dates	John Morris
12:30 p.m. – 12:55 p.m.	Public Comments	John Morris
12:55 p.m. – 1:00 p.m.	Schedule Next Meeting and Adjourn	John Morris

Draft Outline (8/22/02)
Economics Workgroup White Paper

- I. Introduction
 - A. Goals and objectives of the Economics Work Group
 - B. How our work complements that work of the Funding and CALFED Coordination Work Group and the Recycled Water Task Force
 - C. Difference between fiscal and economic feasibility
 - D. Brief discussion of true benefits and costs of recycled water projects
 - E. Why a consistent economic feasibility criteria is necessary
- II. Identify Benefits of Water Recycling Projects
 - A. Economic benefits
 - B. Environmental benefits
 - C. Issues that confound benefits (e.g., irrigation water recycling reducing agricultural return flows and thus reducing instream flows)
 - C. Data sources
- III. Identify Costs of Water Recycling Projects
 - A. Identify cost elements to include as economic costs or benefit
 - B. Environmental costs
 - C. Use of unit cost as basis of comparison to fresh water
 - D. Cost comparison for environmental enhancement or other projects (e.g. recycled water for wetlands)
 - C. Data sources
- IV. Cost of Freshwater Alternatives
 - A. Identify a basis for comparison (i.e. new sources of freshwater)
 - B. Pros/cons of each type of source
 - C. Justification for the basis recommended by Economics Work Group
- V. Economic Criteria for Projects Applying for State Funding
 - A. Identify the criteria and explain why they are relevant
 - B. Criteria for evaluating projects applying for funding
 - C. Implications of high local costs for projects that have regional or statewide benefits
- VI. Conclusions

The following issues may fall into the area of other Work Groups:

- Anti-growth proponents may view recycled water as a supplemental source to fuel growth (Public Education and Outreach); however cost to builders accommodating recycled water, such as installing dual systems, would be of interest to our group
- Costly repetitive Engineering reports needed for each site (Regulations and Permitting; Plumbing Code/Cross Contamination Control); we can count it as a part of project costs, but do we really have any influence over regulations or enforcement?